typercable

# HYC-ENA-MIMO PTP/PTMP Series



### HYC-N1051C/T

### **Features**:

- > PTP/ PTMP Ethernet backhaul
- > 4.920~6.075 GHz Operating Frequency
- > MIMO HT-OFDM Modulation
- > Integrated Multi-Radio Interfaces
- > ±2 ppm Frequency Stability for Mobility & NLOS
- > Fast Data Switching Technology
- > 14 Channel BW (2.5 / 3 / 3.5 / 4 / 5 / 6 / 7 / 8 / 10 / 15 / 20 / 30 / 40 / 52 MHz)
- > Up to 268 Mbps Real TCP Throughput
- > GPS Coordinates and Internet map database
- > 5.2 bits/s/Hz amazing spectral efficiency
- > Multi-hops repeating & Built-in NMS
- > Real Aggregate TCP Throughput  $\geq$  320Mbps @ 4x4 Base Station
- High Efficiency in Multi-hops Repeating
  - Low Throughput dropped @ 40MHz Ch BW (≥170 Mbps @ 20 hops)
  - Short Latency increased @ 40MHz Ch BW [≤35 ms @ 20 hops]
- > IP-68 Water & Dust Resistant
- > IEC61000-4-5 Surge Protection
- > Outstanding MTBF





HYC-N2051C/T-27

HYC-N2052C/T-27

# HYC-N1000 / 2000 Series Multi-MIMO HT-OFDM Outdoor Radio 4x4 MIMO supports Multi-hops repeat 4x4 MIMO supports TDMA Redundancy

Multi-Hops Repeater in e-Rake MIMO PTP/PTMP Series offers customers a great solution for PTP / PTMP / Hot zone applications by integrated multi-radios interfaces and Fast Data Switching technology from Hypercable.This series shows incredible efficiency on multi-hops repeating – truly throughput  $\geq$  170Mbps and only  $\leq$  35 ms total latency after 20 extended hops. Much different from the traditional Wi-fi that dropped 50% throughput per each extended hop and can't get reply from remote device after 5~6 hops for too long latency.

There are 14 channels bandwidth options can be selected easily by software (2.5/3/3.5/4/5/6/7/8/10/15/20/30/40/52 MHz). This feature provides the flexibility of deployment channel plan in crowded city area or high capacity backhaul -- throughput up to 268Mbps.

With MIMO HT-OFDM (High Throughput OFDM) technology, this radio is a high capacity PTP / PTMP backhaul for 5GHz ISM band wireless deployment. It utilizes coordinate and built-in NMS with internet map database to show the environment and status of the link. Customers can easily figure out the linking situation of the deployed radios.

### Product Highlights

- Integrated Multi-radios interfaces on Athena-MIMO platform.
- Multiple radios interfaces were integrated by "Fast Data Switching" technology from HYC inside the Mesh-MIMO series platform. There are 3 type of radios for options: HYC-N1051C / HYC-N2051C (1\*radio) / HYC-N2052C (2\*radios) / HYC-N2053C (3\*radios) and each radio interface can be configured independently to run different wireless connectivity missions.
- > High efficiency transmission in multi-hops repeating (Ex: @ 40MHz Ch BW)

The backbone throughput will remain in a high level even after several hops repeating. ( $\geq$  170 Mbps @ 20 hops), and the total latency is short as well ( $\leq$ 35 ms @ 20 hops).

- Effective spectrum utility/variable capacities with 14 channel Bandwidths This radio has 14 channels bandwidth (2.5 / 3 / 3.5 / 4 / 5 / 6 / 7 / 8 / 10 / 15 / 20 / 30 / 40 / 52 MHz) for optional, which is adjustable via software. This function provides flexibilities of channel plan in crowded urban environment and variable capacities for different applications.
- MIMO HT-OFDM technology provides amazing spectral efficiency Up to 5.2 bits/s/Hz amazing spectral efficiency for all channel bandwidth provided by the MIMO HT-OFDM technology. Work with the variable channel bandwidth options, these two combination features provides great benefits for both crowded urban area and rural area with less interference.
  - TCP throughput at different channel BW+

Channel BW (MHz)	2.5	3.	3.5.	120	5., 25.,	6.1 30.1	7.1 35.1	8.1 40.1	10.,	100000	1000	30.1	40.1	52., 268.,
Real TCP throughput (Mbps)	Construction of the	14.	spectr		25.1	100084	rowde		1000000	11.5	104.,		215.,	268.1

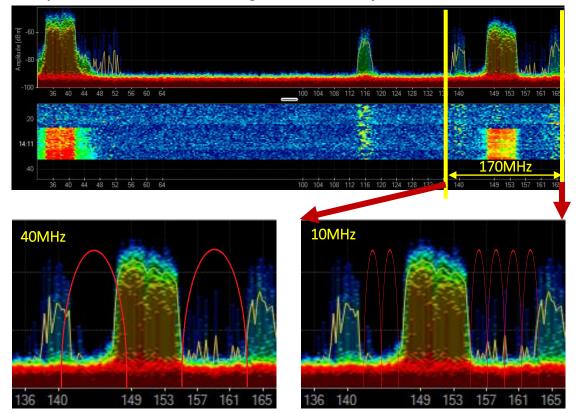
## Specifications

Frequency range         4.920 ~ 6.075 GHz Optional           Channel Band Widh         2.5 / 3 / 3.5 / 4 / 5 / 7 / 8 / 10 / 15 / 20 / 30 / 40 / 52 MHz           Frequency Stability         z 2 pom           Modulation         MIMO HT-OFDM           Modulation         MIMO HT-OFDM           MCS Index         Data Rate (Mbps)         T x Output OPare (dama)         R x Gensitivity (BER 11-04)         Data Rate (Mbps)         T x Output (BER 11-04)         R x Gensitivity (BER 11-04)           MCS3         6.6 / 30         NA         226(1.5)         -94 / 92 Mill         13.527         15/30         27(1.5)         -92 / 90 dBm           MCS3         13/26         NA         226(1.5)         -92 / 90 dBm         27/54         9000         26(1.5)         -93 / 92 / 90 dBm           MCS10         19.539         NA         226(1.5)         -97 / 94 dBm         102/10         23(1.5)         -77 / 75 / 75 dBm           MCS11         2052         NA         22(1.5)         -77 / 75 / 75 dBm         102/20         23(1.5)         -77 / 75 dBm           MCS14         68 / 170         NA         23(1.5)         -76 / 73 dBm         102/21         139 / 76 / 75 dBm           MCS14         68 / 170         NA         23(1.5)         -76 / 73 dBm         102/21	RADIO SPEC	IFICATIONS									
Channel Band Width 2, 2/ 3/ 3.5 / 4/ 7/ 6 / 7 / 8 / 10 / 15 / 20 / 30 / 40 / 52 MHz Frequency Stability 2 / 2 pm Modulation MIMO HT-OFDM MOS Index MIMO-OFDM / HT20 MIMO-OFDM /				4 920 ~ 6 075 GH	tz Optional						
Erequency Stability         ± 2 ppm           Modulation         MIMO HF-OFDM           MCS Index         Data Rate (Mbps)         Tx. Output           MCS Index         Data Rate (Mbps)         Tx. Output           MCS8         6.5/13         N/A         27 (±1.5)         94/-92 dBm         13.5/27         15/30         27 (±1.5)         -92/-90 dBm           MCS8         13/26         N/A         28 (±1.5)         49/-92 dBm         13.5/27         15/30         27 (±1.5)         -92/-90 dBm           MCS10         19/5/38         N/A         28 (±1.5)         49/-92 dBm         43.5/27         15/30         27 (±1.5)         -92/-90 dBm           MCS11         26/52         N/A         28 (±1.5)         49/-70 dBm         46/-70 dBm         49/-70 dBm         28 (±1.5)         -84/-81 dBm           MCS11         26/52         N/A         24 (±1.5)         -41/-70 dBm         12/1/24         136/270         23 (±1.5)         -76/-73 dBm           MCS14         68.5/117         N/A         23 (±1.5)         -76/-73 dBm         12/1/24         136/270         23 (±1.5)         -74/-72 dBm           MCS16         66/130         N/A         23 (±1.5)         -74/-72 dBm         10/1/24         10/1/24		-				5 / 20 / 30 / 40	/ 52 MHz				
Modulation         MIMO +TO-CFDM           MCS Index         Data Rate (Mbps)         Tx Output (RS 11400)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (RS 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Rx Sengitivity (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Data Rate (Mbps)         Tx Output (BER 1*10-6)         Data Rate (Mbps)         Tx Output (SER 1*10-6)         Data Rate (Mbps)         Data Rate (Mbp						,, 20, 00, 10	/ 02 111 12				
MILL         MILL <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>											
Gl=800ns         Gl=400ns         Power (dBm)         (BER 1*10-6)         Gl=800ns         Gl=400ns         Power (dBm)         (BER 1*10-6)           MCS8         6.513         NA         27(±1.5)         -94/-92 dBm         13.527         15/30         27(±1.5)         -92/-90 dBm           MCS10         19.5/39         NA         28(±1.5)         -90/-87 dBm         40.5/81         45/90         26(±1.5)         -87/-83 dBm           MCS11         26/52         NA         28(±1.5)         -87/-84 dBm         54/108         60/120         25(±1.5)         -87/-93 dBm           MCS13         52/104         NA         23(±1.5)         -78/-73 dBm         108/216         120/240         23(±1.5)         -78/-73 dBm           MCS13         52/104         NA         23(±1.5)         -78/-73 dBm         108/216         120/240         23(±1.5)         -74/-72 dBm           MCS14         65/130         NA         23(±1.5)         -78/-73 dBm         135/270         23(±1.5)         -74/-72 dBm           MCS15         65/130         NA         23(±1.5)         -76/-73 dBm         135/270         23(±1.5)         -74/-72 dBm           MCS16         65/130         NA         23(±1.5)         -74/-72 dBm         <			MIMO				MIM	O-OFDM / HT40			
Gl=800ns         Gl=400ns         Power (dBm)         (BER 1*10-6)         Gl=800ns         Gl=400ns         Power (dBm)         (BER 1*10-6)           MCS8         6.513         NA         27(±1.5)         -94/-92 dBm         13.527         15/30         27(±1.5)         -92/-90 dBm           MCS10         19.5/39         NA         28(±1.5)         -90/-87 dBm         40.5/81         45/90         26(±1.5)         -87/-83 dBm           MCS11         26/52         NA         28(±1.5)         -87/-84 dBm         54/108         60/120         25(±1.5)         -87/-93 dBm           MCS13         52/104         NA         23(±1.5)         -78/-73 dBm         108/216         120/240         23(±1.5)         -78/-73 dBm           MCS13         52/104         NA         23(±1.5)         -78/-73 dBm         108/216         120/240         23(±1.5)         -74/-72 dBm           MCS14         65/130         NA         23(±1.5)         -78/-73 dBm         135/270         23(±1.5)         -74/-72 dBm           MCS15         65/130         NA         23(±1.5)         -76/-73 dBm         135/270         23(±1.5)         -74/-72 dBm           MCS16         65/130         NA         23(±1.5)         -74/-72 dBm         <	MCS Index	Data Rat	e (Mbps)	Ty Output	Py Sonsitivity	Data Rat	e (Mbps)	Tx Output	Py Sensitivity		
MCS9         13/26         N/A         26(x1.5)         -92/-90 dBm         27/84         30/00         28(x1.5)         -89/-87 dBm           MCS10         19.5/39         N/A         26(x1.5)         -90/-87 dBm         40.5/81         46/90         28(x1.5)         -87/-83 dBm           MCS11         26/52         N/A         22(x1.5)         -87/-84 dBm         64/108         60/120         25(x1.5)         -87/-73 dBm           MCS13         52/104         N/A         23(x1.5)         -80/-77 dBm         108/216         120/240         23(x1.5)         -78/-75 dBm           MCS15         65/130         N/A         23(x1.5)         -78/-75 dBm         135/270         150/300         23(x1.5)         -74/-72 dBm           MTERFACES         Vireless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors         10/100/100         23(x1.5)         -74/-72 dBm           MAAGEABLITY         Maagement and Stup         Web-based (Chrome / IE 9.0 or later)         SNMP agents         MB II           Protocol         TCP/R1 PK/SFX, NutBEUI         Network Architecture         PTP (1+0 / 2+0) / Multi-hops Repeating / PTMP           Antenna Alignment         WEB GUI Local / Remote Information         Buil-in NMS         Live Information           Buil-in NMS         <					(BER 1 <sup>E</sup> 10-6)						
MCS10         19.5/39         N/A         28(±1.5)         -90/87 dBm         40.5/81         45/90         28(±1.5)         -487/83 dBm           MCS11         26/52         N/A         26(±1.5)         -47/84 dBm         54/108         60/120         25(±1.5)         -487/83 dBm           MCS12         39778         N/A         22(±1.5)         -48/47 dBm         81/162         90/180         24(±1.5)         -48/47 dBm           MCS13         52/104         N/A         23(±1.5)         -78/75 dBm         130/270         23(±1.5)         -78/75 dBm           MCS14         58.5/117         N/A         23(±1.5)         -76/73 dBm         135/270         23(±1.5)         -74/-72 dBm           INTERFACES         Wireless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors         16 x N-type Female Connectors         10 x 3/20         23(±1.5)         -74/-72 dBm           INTERFACES         Wireless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors         16 x N-type Female Connectors         16 x N-type Female Connectors         174/-72 dBm           INTERFACES         MBI II         Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors         16 x N-type Female Connectors         174/-72 dBm           INTONO         TCPI/II IPX/SKPX, NetBEUI         Nasea	MCS8	6.5/13	N/A	27(±1.5)	-94/-92 dBm	13.5/27	15/30	27(±1.5)	-92/-90 dBm		
MCS11         26/52         N/A         25(±1.5)         -87/-84 dBm         54/108         60/120         25(±1.5)         -84/-81 dBm           MCS12         39/76         N/A         24(±1.5)         -84/-81 dBm         81/162         90/180         24(±1.5)         -84/-81 dBm           MCS13         52/104         N/A         23(±1.5)         -80/-77 dBm         109/216         120/240         23(±1.5)         -76/-73 dBm           MCS14         58.5/117         N/A         23(±1.5)         -76/-73 dBm         121/242         135/270         23(±1.5)         -76/-73 dBm           MCS15         65/130         N/A         23(±1.5)         -76/-73 dBm         135/270         150/300         23(±1.5)         -74/-72 dBm           MTEREFACES         Virieless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors         5 x N-type Female Connectors         135/270         23(±1.5)         -74/-72 dBm           MANAGEABLITY         Management and Setup         Web-based (Chrome / IE 9.0 or later)         SNMP agents         MB II         -           Protocol         TCPIP. [PX/SPX, NetBEUI         Numation         Bate Encryton         MAC access control / Diable SSID / Proprietary protocol           Bata Encrytoin         WPA-PSK / WPA2-PSK         Advanced Security	MCS9	13/26	N/A	26(±1.5)	-92/-90 dBm	27/54	30/60	26(±1.5)	-89/-87 dBm		
MCS12         39/78         N/A         24(±1.5)         -84/-81 dBm         81/162         90/180         24(±1.5)         -81/-79 dBm           MCS13         52/104         N/A         23(±1.5)         -76/-73 dBm         108/276         120/240         23(±1.5)         -76/-73 dBm           MCS15         65/130         N/A         23(±1.5)         -76/-73 dBm         135/270         150/300         23(±1.5)         -74/-73 dBm           INTERFACES         Vireless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors / 6 x N-type Female Connectors         10/100/1000         Ease-17 K-14-5 pt         Hill P         -74/-72 dBm         35/270         150/300         23(±1.5)         -74/-72 dBm           MindegRABILITY         Management and Setup         Wab-based (Chrome / IE 9.0 or later)         SNIMP agents         MIB         NIB         NIB <td< td=""><td>MCS10</td><td>19.5/39</td><td>N/A</td><td>26(±1.5)</td><td>-90/-87 dBm</td><td>40.5/81</td><td>45/90</td><td>26(±1.5)</td><td>-87/-83 dBm</td></td<>	MCS10	19.5/39	N/A	26(±1.5)	-90/-87 dBm	40.5/81	45/90	26(±1.5)	-87/-83 dBm		
MCS13         52/104         N/A         22(±1.5)         -80/-77 dBm         108/216         120/240         23(±1.5)         -78/-75 dBm           MCS14         58.5/117         N/A         23(±1.5)         -76/-73 dBm         135/270         23(±1.5)         -76/-73 dBm           MCS15         65/130         N/A         23(±1.5)         -76/-73 dBm         135/270         23(±1.5)         -76/-73 dBm           MCS15         65/130         N/A         23(±1.5)         -76/-73 dBm         135/270         150/300         23(±1.5)         -74/-72 dBm           MICS15         65/130         N/A         23(±1.5)         -76/-73 dBm         135/270         150/300         23(±1.5)         -74/-72 dBm           MIRENEXCES         Wireless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors / 6 x N-type Female Connectors         10/100/1000 Base-T RJ-45 pot with M25 Cable Gland         MANAGEABULTY           ManageABULTY         Wab-based (Chrome / IE 9.0 or later)         SNMP agents         NIB II         Protocol         TCP/P, IPX/SPX, NetBEUI           Network Architecture         PTP (14-0/2+0/ / Muli-hops Repeating / PTMP         Anterna Algoment         WEB GUI Local / Remote Information           Buil-in NMS         Luve linking status of the network by GPS coordinates and internet map database         Security<	MCS11	26/52	N/A	25(±1.5)	-87/-84 dBm	54/108	60/120	25(±1.5)	-84/-81 dBm		
MCS14         58.5/117         N/A         23(±1.5)         -78/-75 dBm         121/242         135/270         23(±1.5)         -76/-73 dBm           MCS15         65/30         N/A         23(±1.5)         -76/-73 dBm         135/270         150/300         23(±1.5)         -76/-73 dBm           INTERFACES         Virieless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors / 6 x N-type Female Connectors         150/300         23(±1.5)         -74/-72 dBm           MANAGEABILITY         Management and Setup         Web-based (Chrome / IE 9.0 or later)         SMM	MCS12	39/78	N/A	24(±1.5)	-84/-81 dBm	81/162	90/180	24(±1.5)	-81/-79 dBm		
MCS15         65/130         N/A         23(±1.5)         -76/-73 dBm         135/270         150/300         23(±1.5)         -74/-72 dBm           INTERFACES         Wireless Interface : 2 x N-type Female Connectors / 4 x N-type Female Connectors / 6 x N-type Female Connectors         150/300         23(±1.5)         -74/-72 dBm           Monoses-T RJ-45 port with M25 Calbe Gland         Management and Setup         Web-based (Chrome / IE 9.0 or later)         SMMP agement         SMMP           MANAGEABILITY         Management and Setup         Web-based (Chrome / IE 9.0 or later)         SMMP agement         SMMP	MCS13	52/104	N/A	23(±1.5)	-80/-77 dBm	108/216	120/240	23(±1.5)	-78/-75 dBm		
INTERFACES           Wireless Interface: 2 x N-type Female Connectors / 6 x N-type Female Connectors           10/100/1000 Base-T RJ-45 port with M25 Calbe Gland           MANAGEABILITY           Management and Setup         Web-based (Chrome / IE 9.0 or later)           SNMP agents         MIB II           Protocol         TCP/IP, IPX/SPX, NetBEUI           Network Architecture         PTP (1+0 / 2+0) / Multi-hops Repeating / PTMP           Antana Alignment         WEB GUI Local / Remote Information           Built-in NMS         Live linking status of the network by GPS coordinates and internet map database           Security         Data Encryption           Advanced Security         MA2 access control / Diable SSID / Proprietary protocol           ENVIRONMENT         Qperating Temperature           Quertaing Temperature         -30-60 °C           Storage Temperature         -30-60 °C           Storage Temperature         -30-60 °C           Storage Temperature         -30-70 °C           Humidity         95% non-condensing           POWER SUPPLY & CONSUMPTION           Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE           Power Consumption :         14 Software Subay (Max) @ DC 48V           HYC-N2052C-27 : 16Watts (typical) / 12 Watts (Max) @ DC 48V	MCS14	58.5/117	N/A	23(±1.5)	-78/-75 dBm	121/242	135/270	23(±1.5)	-76/-73 dBm		
Wireless Interface : 2 x N-type Female Connectors / 6 x N-type Female Connectors           10/10/1000 Base-T RJ-45 port with M25 Calbe Gland           MANAGEABILITY           Management and Setup         Web-based (Chrome / IE 9.0 or later)           SNMP agents         MIB II           Protocol         TCP/IP, IPX/SPX, NetBEUI           Network Architecture         PTP (1+0 / 2+0) / Multi-hops Repeating / PTMP           Antenna Alignment         WEB GUI Local / Remote Information           Built-in NMS         Live linking status of the network by GPS coordinates and internet map database           Security         Data Encryption           MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT           Operating Temperature         -30-60 °C           Storage Temperature         -30-70 °C           Humidity         95% non-condensing           POWER SUPPLY & CONSUMPTION         Power Consumption :           PYC-N1051C-53 : 100Watts (typical) / 12 Watts (Max.) @ DC 48V           PHYSICAL         259 (L) * 250 (W) * 75 (H) ; mm (External Model)           Dimension         259 (L) * 250 (W) * 75 (H) ; mm (Integrated Model)           3254 (J) * 335 (W) * 88 (H) ; mm (Integrated Model)         3254 (J) * 335 (W) * 88 (H); mm (Integrated Model)           Weight         1.84 (250-6.075 GHz 0.5 W Outdoor 222 MIMO HT-OFDM PTP/PTMP Ethernet Backhau	MCS15	65/130	N/A	23(±1.5)	-76/-73 dBm	135/270	150/300	23(±1.5)	-74/-72 dBm		
10/100/1000 Base-T RJ-45 port with M25 Calbe Gland         MANAGEABILITY         Management and Setup       Web-based (Chrome / IE 9.0 or later)         SMMP agents       MB II         Protocol       TCP/R/ IPX/SPX, NetBEUI         Network Architecture       PTP (1+0 / 2+0) / Multi-hops Repeating / PTMP         Anterna Alignment       WEB GUI Local / Remote Information         Built-In NMS       Live linking status of the network by GPS coordinates and internet map database         Security       Data Encryption         Data Encryption       WPA-PSK / WPA2-PSK         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       Operating Temperature         Operating Temperature       -30-60 °C         Storage Temperature       -30-70 °C         Humidity       95% non-condensing         Power Supply: AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :       HYC-M1051C-53: 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-M2051C-27: 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-M2051C-27: 10Watts (typical) / 19 Watts (Max.) @ DC 48V         HYC-M2051C-27: 10Watts (typical) / 19 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (1) * 250 (W) * 75 (H); mm (External Model) <td>INTERFACES</td> <td>)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	INTERFACES	)									
MANAGEABILITY         Management and Setup       Web-based (Chrome / IE 9.0 or later)         SMMP agents       MIB II         Protocol       TCP/IP, IPX/SPX, NetBEUI         Network Architecture       PTP (1+0 / 2+0) / Multi-hops Repeating / PTMP         Anterna Alignment       WEB GUI Local / Remote Information         Built-In NNS       Live linking status of the network by GPS coordinates and internet map database         Security       Data Encryption         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       -30-60 °C         Glorage Temperature       -30-70 °C         Humidity       95% non-condensing         POWER SUPPLY & CONSUMPTION       95% non-condensing         Power Consumption :       Yeats (Max.) @ DC 48V         HYC-N205C-27: 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N205C-27: 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N205C2-27: 16Watts (typical) / 19 Watts (Max.) @ DC 48V         HYC-N205C2-27: 16Watts (typical) / 19 Watts (Max.) @ DC 48V         HYC-N205C2-27: 16Watts (typical) / 19 Watts (Max.) @ DC 48V         HYC-N205C2-27: 16Watts (typical) / 19 Watts (Max.) @ DC 48V         HYC-N205C2-27: 16Watts (typical) / 19 Watts (Max.) @ DC 48V         HYC-N205C2-27: 16Watts (typical) / 19 Watts (Max.) @ DC 48V <tr< td=""><td>Wireless Inter</td><td>face : 2 x N-ty</td><td>pe Female Co</td><td>nnectors / 4 x N-ty</td><td>pe Female Conne</td><td>ctors / 6 x N-t</td><td>ype Female C</td><td>onnectors</td><td></td></tr<>	Wireless Inter	face : 2 x N-ty	pe Female Co	nnectors / 4 x N-ty	pe Female Conne	ctors / 6 x N-t	ype Female C	onnectors			
Management and Setup       Web-based (Chrome / IE 9.0 or later)         SNMP agents       MIB II         Protocol       TCP/IP, IPX/SPX, NetBEUI         Network Architecture       PTP (1+0/2+0) / Multi-hops Repeating / PTMP         Antenna Alignment       WEB GUI Local / Remote Information         Built-in NMS       Live linking status of the network by GPS coordinates and internet map database         Security       Data Encryption         Data Encryption       WPA-PSK / WPA2-PSK         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       Operating Temperature         Operating Temperature       -30-60 °C         Storage Temperature       -30-70 °C         Humidity       95% non-condensing         POWER SUPPLY & CONSUMPTION       Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :       HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         PHYSICAL       259 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)       385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         Weight       1.8Kg (External Model)       325 (L) * 250 (W) * 75 (H) ; mm (Integrated Model)         W	10/100/1000 E	Base-T RJ-45	port with M25	Calbe Gland							
SNMP agents       MIB II         Protocol       TCP/IP, IPX/SPX, NetBEUI         Network Architecture       PTP (1+0 / 2+0) / Multi-hops Repeating / PTMP         Anterna Alignment       WEB GUI Local / Remote Information         Built-in NMS       Live linking status of the network by GPS coordinates and internet map database         Security       Data Encryption         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       Operating Temperature         -30-60 °C       Storage Temperature         -30-70 °C       Humidity         95% non-condensing       POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :       PYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2052C-27 : 16Watts (typical) / 12 Watts (Max.) @ DC 48V         PHYSICAL       Dimension         259 (L) * 250 (W) * 75 (H) ; mm (External Model)         354 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         WaRRANTY       1 YEAR         ORDERING INFORMATION       As20-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-	MANAGEABIL	LITY									
Protocol         TCP/IP, IPX/SPX, NetBEUI           Network Architecture         PTP (1+0/2+0) / Multi-hops Repeating / PTMP           Antenna Alignment         WEB GUI Local / Remote Information           Built-in NMS         Live linking status of the network by GPS coordinates and internet map database           Security         Data Encryption         WPA-PSK / WPA2-PSK           Advanced Security         MAC access control / Disable SSID / Proprietary protocol           ENVIRONMENT         Operating Temperature         -30-60 °C           Storage Temperature         -30-70 °C         Humidity         95% non-condensing           POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption : HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V           PVC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V           PHYSICAL         Z59 (L) * 250 (W) * 75 (H) ; mm (External Model) 385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)           WarRANTY         1.8Kg (External Model) 3.2Kg (Integrated Model)           N/RARANTY         1 YEAR           ORDERING INFORMATION         4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.           HYC-N2051C-22         4.920-6.075 GHz 0.5	0			Web-based (Chro	ome / IE 9.0 or late	er)					
Network Architecture         PTP (1+0 / 2+0) / Multi-hops Repeating / PTMP           Anterna Alignment         WEB GUI Local / Remote Information           Built-in NIMS         Live Inking status of the network by GPS coordinates and internet map database           Security         Data Encryption           Data Encryption         WPA-PSK / WPA2-PSK           Advanced Security         MAC access control / Disable SSID / Proprietary protocol           ENVIRONMENT         Operating Temperature           Operating Temperature         -30-60 °C           Storage Temperature         -30-70 °C           Humidity         95% non-condensing           POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE           Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :           HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2052C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V           PHYSICAL         Z59 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)           Urieght         1.8Kg (External Model)         3.2Kg (Integrated Model)         3.2Kg (Integrated Model)           WGRANNY         1 YEAR         ORDERING INFORMATION         4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethermet Backhaul,											
Antenna Alignment       WEB GUI Local / Remote Information         Built-in NMS       Live linking status of the network by GPS coordinates and internet map database         Security       Data Encryption         Data Encryption       WPA-PSK / WPA2-PSK         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       Operating Temperature         -30-60 °C       Storage Temperature         -30-70 °C       Humidity         POWER SUPPLY & CONSUMPTION       POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :       HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 16Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 16Watts (typical) / 19 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 385 (W) * 98 (H); mm (Integrated Model)       3.2Kg (Integrated Model)         3.2Kg (Integrated Model)       3.2Kg (Integrated Model)         3.2Kg (Integrated Model)       3.2Kg (Integrated Model)         3.2Kg (Integrated Model)       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C											
Built-in NMS       Live linking status of the network by GPS coordinates and internet map database         Security       Data Encryption       WPA-PSK / WPA2-PSK         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       Operating Temperature       -30-60 °C         Storage Temperature       -30-70 °C       Humidity       95% non-condensing         POWER SUPPLY & CONSUMPTION       Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :       HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2052C-27 : 16Watts (typical) / 12 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 385 (W) * 98 (H); mm (Integrated Model)         3.2Kg (Integrated Model)         3.2Kg (Integrated Model)         3.2Kg (Integrated Model)         4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable ch	-										
Security       WPA-PSK / WPA2-PSK         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       Operating Temperature         -30-60 °C       Storage Temperature         Storage Temperature       -30-70 °C         Humidity       95% non-condensing         POWER SUPPLY & CONSUMPTION       Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :       HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N205C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 386 (W) * 98 (H) ; mm (Integrated Model)       3.2Kg (Integrated Model)         3.2Kg (Integrated Model)       3.2Kg (Integrated Model)         Weight       1.8Kg (External Model)         3.2Kg (Integrated Model)       3.2Kg (Integrated Model)         Weight       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO	0	ment									
Data Encryption       WPA-PSK / WPA2-PSK         Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT       Operating Temperature         -30-60 °C       Storage Temperature         -30-70 °C       Humidity         POWER SUPPLY & CONSUMPTION       95% non-condensing         POwer Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption       HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 385 (V) * 98 (H) ; mm (Integrated Model)       3.2Kg (Integrated Model)         WaRRANTY       1 XEAR         ORDERING INFORMATION       HYC-N1051C-53         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 softw				Live inking status	s of the network by						
Advanced Security       MAC access control / Disable SSID / Proprietary protocol         ENVIRONMENT		00		W/DA_DSK / W/DA	2-DSK						
ENVIRONMENT       -30-60 °C         Storage Temperature       -30-70 °C         Humidity       95% non-condensing         POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :         HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2052C-27 : 16Watts (typical) / 19 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         3.2Kg (Integrated Model)         3.2Kg (Integrated Model)         3.2Kg (Integrated Model)         3.2Kg (Integrated Model)         4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.											
Storage Temperature       -30~70 °C         Humidity       95% non-condensing         POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :         HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 16Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2052C-27 : 16Watts (typical) / 12 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model) 385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         Weight       1.8Kg (External Model) 3.2Kg (Integrated Model)         WARRANTY       1 YEAR         ORDERING INFORMATION       HYC-N1051C-53         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2052C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software select						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u></u>				
Humidity       95% non-condensing         POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :         HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 19 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model) 385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         Weight       1.8Kg (External Model) 3.2Kg (Integrated Model)         WaRRANTY       1 YEAR         ORDERING INFORMATION       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	Operating Ten	nperature		-30~60 °C							
POWER SUPPLY & CONSUMPTION         Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :         HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2052C-27 : 10Watts (typical) / 19 Watts (Max.) @ DC 48V         PHYSICAL         Dimension         259 (L) * 250 (W) * 75 (H) ; mm (External Model)         385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         Weight         1.8Kg (External Model)         3.2Kg (Integrated Model)         WARRANTY         1 YEAR         ORDERING INFORMATION         HYC-N1051C-53         4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27         4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27         4.920-6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	Storage Temp	erature		-30~70 °C							
Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE         Power Consumption :         HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V         HYC-N2052C-27 : 16Watts (typical) / 12 Watts (Max.) @ DC 48V         PHYSICAL         Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model) 385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         Weight       1.8Kg (External Model) 3.2Kg (Integrated Model)         WARRANTY         1 YEAR         ORDERING INFORMATION         HYC-N1051C-53       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	Humidity			95% non-conden	sing						
Power Consumption : HYC-N1051C-53 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V HYC-N2051C-27 : 10Watts (typical) / 12 Watts (Max.) @ DC 48V PHYSICAL Dimension 259 (L) * 250 (W) * 75 (H) ; mm (External Model) 385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model) Weight 1.8Kg (External Model) 3.2Kg (Integrated Model) WARRANTY 1 YEAR ORDERING INFORMATION HYC-N1051C-53 4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 1 4 software selectable channel bandwidth. HYC-N2051C-27 4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 1 4 software selectable channel bandwidth. HYC-N2051C-27 4.920-6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 1 4 software selectable channel bandwidth. HYC-N2051C-27 4.920-6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul,	POWER SUP	PLY & CONSI	JMPTION								
Dimension       259 (L) * 250 (W) * 75 (H) ; mm (External Model) 385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         Weight       1.8Kg (External Model) 3.2Kg (Integrated Model)         WARRANTY       3.2Kg (Integrated Model)         1 YEAR       ORDERING INFORMATION         HYC-N1051C-53       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	Power Consur HYC-N1051C HYC-N2051C	mption : -53 : 10Watts -27 : 10Watts	(typical) / 12 V (typical) / 12 V	Vatts (Max.) @ DC Vatts (Max.) @ DC	48V 48V	atts) with 48VI	DC POE				
Dimension       385 (L) * 385 (W) * 98 (H) ; mm (Integrated Model)         Weight       1.8Kg (External Model)         3.2Kg (Integrated Model)         WARRANTY         1 YEAR         ORDERING INFORMATION         HYC-N1051C-53       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	PHYSICAL										
Weight       3.2Kg (Integrated Model)         WARRANTY       1 YEAR         ORDERING INFORMATION       HYC-N1051C-53         HYC-N1051C-53       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	Dimension						el)				
1 YEAR         ORDERING INFORMATION         HYC-N1051C-53       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2052C-27       4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	Weight										
ORDERING INFORMATION           HYC-N1051C-53         4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.           HYC-N2051C-27         4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.           HYC-N2051C-27         4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.           HYC-N2052C-27         4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul,	WARRANTY										
HYC-N1051C-53       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul with 26dBi Integrated Panel Antenna, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.	1 YEAR										
HYC-N1051C-55       14 software selectable channel bandwidth.         HYC-N2051C-27       4.920~6.075 GHz 0.5 W Outdoor 2x2 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul, 14 software selectable channel bandwidth.         HYC-N2052C-27       4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul,	ORDERING IN	NFORMATION	1								
HYC-N2051C-27 14 software selectable channel bandwidth. HXC-N2052C-27 4.920~6.075 GHz 0.5 W Outdoor 4x4 MIMO HT-OFDM PTP/PTMP Ethernet Backhaul,	HYC-N1051C					P/PTMP Ether	net Backhaul	with 26dBi Integrat	ed Panel Antenna,		
	HYC-N2051C					P/PTMP Ether	net Backhaul,				
	HYC-N2052C					P/PTMP Ether	net Backhaul,				

### True Value of narrow bandwidth with high spectral efficiency

- 1. More effective non-overlapping channels for flexible channel Plan
- 2. More total assumption capacity due to more effective narrow band channels in limited clear band without interferences.

Example: In a 170MHz available range with other interference source



**40 MHz** channel BW: **1 x effective channel** without interference only, total throughput < 300Mbps.

**10 MHz** channel BW: **6 x effective channels** without interferences, each channel offers 50Mbps TCP throughput. Total throughput about 300Mbps

**2.5 MHz** channel BW: **24 x effective channels** without interferences, each channel offers 12Mbps TCP throughput. Total throughput about 300Mbps.

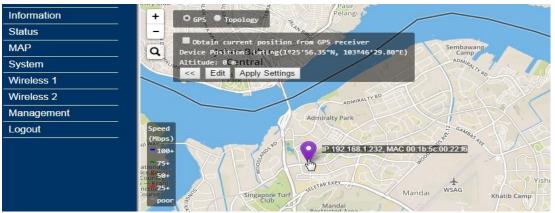
Channel BW (MHz)	2.5	3	3.5	4	5	6	7	8	10	15	20	30	40	52
Real TCP throughput (Mbps)	12	14	17	20	25	30	35	40	51	77	104	158	215	268
Application area	Va	luable	spectr	um		C	Crowde	ed urba	n			Ru	ıral	

**Channel Bandwidth & TCP Throughput list table** 

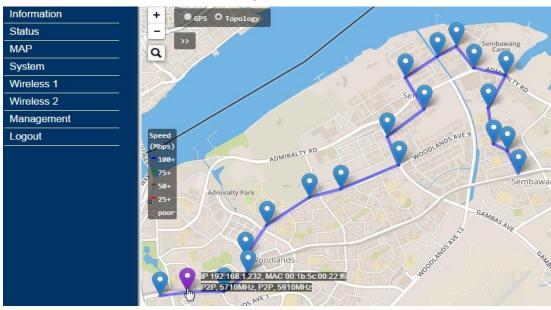
### Built-in NMS function --- GPS Coordinates Input setting page

Information	System > Basic Setti	ng						
Status	Device Settings							
MAP	Device Name	DEVICE030000						
System	Ethernet 1							
Basic Settings	Data Rate	10/100/1000M Auto Negotiation 🔻						
IP St Ings	VLAN(802.1Q)	C Enable   Disable						
STP Settings	Management VLAN ID	0						
Time Settings	Ethernet 2							
Wireless 1	Data Rate	10/100/1000M Auto Negotiation 🔻						
Wireless 2	VLAN(802.1Q)	Enable  Disable						
Management	Management VLAN ID	0						
Logout	GPS Coordinates							
		Obtain current position from GPS receiver						
	Latitude:	N ▼ 1 °25 '56.35 "						
	Longitude:	E • 103 ° 46 29.80						
	Altitude:	0.00 m						
		Apply Cancel						

#### Local Site info -- Device name / MAC address



#### Remote Site info - IP address / MAC / Operation Mode / RSSI / Data Rate / Distance



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info@hypercable.fr www.hypercable.fr

