



HYC-N300cS – 2 watts series
600MHz HT-OFDM Outdoor & Indoor Radio
Proprietary TDMA Protocol
with optional WiFi AP & GPS Receiver

Applications

- NLOS Wireless internet
- Internet access service for POS / ATM.
- Data / Voice / Video transmission among crowded buildings.
- Long distance Wireless access in wide rural area, for TWS

Features:

600MHz Main System (Option 30 Mhz up to 950 MHz)

- 600MHz 2 Watts Radio with TDMA protocol for wireless access in NLOS environment
- SISO HT-OFDM Modulation
- 7 Channel BW (2.5 / 3 / 3.5 / 4 / 5 / 6 / 7 MHz)
- ± 2 ppm Frequency Stability for Mobility & NLOS
- 2.5 bits/s/Hz amazing spectral efficiency
- GPS Coordinates and Build-in NMS with Map
- LED RSSI indicators (can be off by software)
- IEC61000-4-5 Surge Protection
- IP-68 Water & Dust Resistant

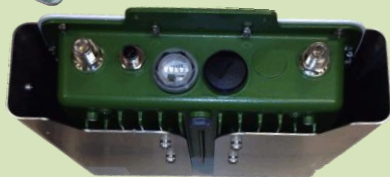
2.4GHz WiFi AP (ATHN300cSCR-33gn only)

- 2.4GHz WiFi AP embedded for coverage.
- 2x2 MIMO HT-OFDM Modulation
- 4 Channel BW (5 / 10 / 20 / 40 MHz)
- ± 2 ppm Frequency Stability for Mobility & NLOS
- 5.2 bits/s/Hz amazing spectral efficiency

Models



HYC-LTRG-201cSCP-33
2 watts CPE indoor.



HYC-N300cS-33gn
2 watts PTP and PMPT
SISO AP & CPE, outdoor & Wi-Fi AP

LandRake HYC-N300cS series 600MHz 2 Watts SISO HT-OFDM Radio has 4 models:

1. HYC-N300cST-33

Outdoor 600 ~ 620 MHz 2W SISO HT-OFDM PTP / PTMP (CSMA / TDMA) Radio (3 operation modes including: BS / CPE / Bridge)

2. HYC-N300cST-33

Outdoor **Dual** 600 ~ 620 MHz 2W SISO HT-OFDM PTP / PTMP (CSMA / TDMA) Radio (3 operation modes including: BS / CPE / Bridge)

3. HYC-N300cSCP-33

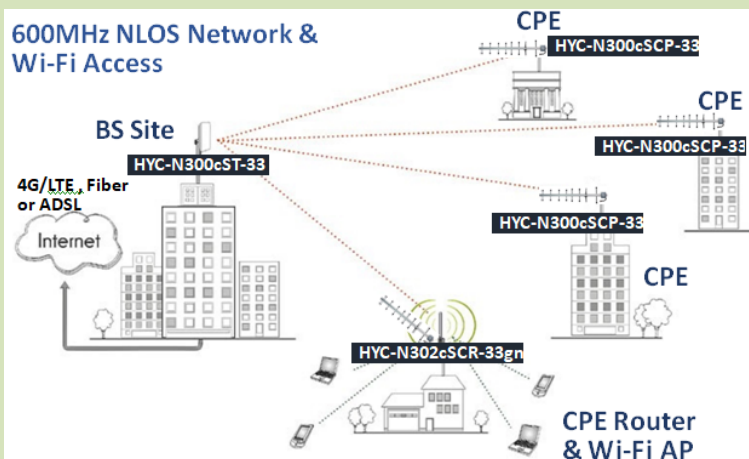
Outdoor 600 ~ 620 MHz 2W SISO HT-OFDM Outdoor 600 ~ 620 MHz 2W SISO HT-OFDM CPE

4. HYC-N302cSCR-33gn

Outdoor 600 ~ 620 MHz 2W SISO HT-OFDM CPE Router with 802.11gn WiFi AP

With 2 watts high output power 600MHz HT-OFDM (TDMA protocol) Radio, **HYC-N300cS series** allows you to Share the 4G(LTE) / Fiber / ADSL backhaul bandwidth to several client nodes for NLOS wireless internet access & Ethernet applications. Customer can deploy the radios as Point to Point Bridge or Point to Multi-Point Network.

Built for secure and uninterrupted operation in harsh environments, **HYC-N300cS series** support operating temperature from -30 to +60°C, build-in surge protection circuit (4KV/2KA) and IP-68 aluminum diecasting enclosure.





Specifications – 600MHz Main system

RADIO SPECIFICATIONS

Frequency range	600 ~ 620 MHz
Channel Band Width	2.5 / 3 / 3.5 / 4 / 5 / 6 / 7 MHz
Frequency Stability	± 2 ppm
Modulation	SISO HT-OFDM with Proprietary TDMA Protocol

MCS Index	SISO HT-OFDM @ 2.5MHz			SISO HT-OFDM @ 7MHz		
	Data Rate (Mbps)	Tx Power (dBm)	Rx Sensitivity	Data Rate (Mbps)	Tx Power (dBm)	Rx Sensitivity
MCS0	0.81	33 (±1.5)	-92 dBm	2.36	33 (±1.5)	-90 dBm
MCS1	1.62	33 (±1.5)	-90 dBm	4.73	33 (±1.5)	-87 dBm
MCS2	2.44	33 (±1.5)	-87 dBm	7.09	33 (±1.5)	-83 dBm
MCS3	3.25	31 (±1.5)	-84 dBm	9.45	31 (±1.5)	-81 dBm
MCS4	4.88	31 (±1.5)	-81 dBm	14.18	31 (±1.5)	-79 dBm
MCS5	6.50	29 (±1.5)	-77 dBm	18.90	29 (±1.5)	-75 dBm
MCS6	7.31	29 (±1.5)	-75 dBm	21.18	29 (±1.5)	-73 dBm
MCS7	8.12	28 (±1.5)	-73 dBm	23.63	28 (±1.5)	-72 dBm

INTERFACES

1 x N-type Female Connectors : HYC-N300cST-33 / HYC-N300cSCP-33
 2 x N-type Female Connectors : HYC-N300ccST-33 / HYC-N302cSCR-33gn
 10/100/1000 Base-T RJ-45 port with M25 Cable Gland

MANAGEABILITY

Management and Setup	Web-based (Chrome / IE 9.0 or later)	
SNMP agents	MIB II	
Protocol	TCP/IP, IPX/SPX, NetBEUI	
Operating mode	HYC-N300cS-33	Base Station / CPE / Peer to Peer Bridge
	HYC-N300ccS-33 (Multi-hops)	Base Station / CPE / Peer to Peer Bridge
	HYC-N300cSCP-33	CPE
	HYC-N302cSCR-33gn	CPE router & 2.4GHz 802.11gn AP
Antenna Alignment	WEB GUI Local / Remote Information	
Built-in NMS	Live linking status of the network by GPS coordinates and internet map database	
Built-in GPS Receiver	Self-locate GPS coordinates to synchronize NMS live linking status (Optional)	

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-N300cST-33	25Watts @48VDC
	HYC-N300ccST-33	36Watts @48VDC
	HYC-N300cSCP-33	25Watts @48VDC
	HYC-N302cSCR-33gn	30Watts @48VDC

PHYSICAL

Dimension	259 (L) * 250 (W) * 75 (H) ; mm (External antenna model)
Weight	2Kg

WARRANTY

1 YEAR



Router radio 3G-4G LTE IP68 backbone & VHF UHF 2watts PTMT Access Point

HYC-OLTRG-201cSB-33

Specifications – 2.4GHz WiFi AP (HYC-N302cSCR-33gn only)

RADIO SPECIFICATIONS						
Frequency range	2.4~ 2.4835 GHz Optional					
Channel Band Width	5 / 10 / 20 / 40 MHz					
Frequency Stability	± 2 ppm					
Modulation	MIMO HT-OFDM					
MCS Index	MIMO-OFDM / HT20			MIMO-OFDM / HT40		
	Data Rate (Mbps)	Tx Output Power (dBm)	Rx Sensitivity (BER 1 ⁻⁶ 10-6)	Data Rate (Mbps)	Tx Output Power (dBm)	Rx Sensitivity (BER 1 ⁻⁶ 10-6)
	GI=800ns			GI=800ns		
MCS8	6.5/13	27(±1.5)	-94/-92 dBm	13.5/27	27(±1.5)	-92/-90 dBm
MCS9	13/26	26(±1.5)	-92/-90 dBm	27/54	26(±1.5)	-89/-87 dBm
MCS10	19.5/39	26(±1.5)	-90/-87 dBm	40.5/81	26(±1.5)	-87/-83 dBm
MCS11	26/52	25(±1.5)	-87/-84 dBm	54/108	25(±1.5)	-84/-81 dBm
MCS12	39/78	24(±1.5)	-84/-81 dBm	81/162	24(±1.5)	-81/-79 dBm
MCS13	52/104	23(±1.5)	-80/-77 dBm	108/216	23(±1.5)	-78/-75 dBm
MCS14	58.5/117	23(±1.5)	-78/-75 dBm	121/242	23(±1.5)	-76/-73 dBm
MCS15	65/130	23(±1.5)	-76/-73 dBm	135/270	23(±1.5)	-74/-72 dBm
INTERFACES						
Wireless Interface : 2 x N-type Female Connectors						
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 / PTMP					
Antenna Alignment	WEB GUI Local / Remote Information					
Security						
Data Encryption	WPA-PSK / WPA2-PSK					
Advanced Security	MAC access control / Disable SSID					
ENVIRONMENT						
Operating Temperature	-30~60 °C					
Storage Temperature	-30~70 °C					
Humidity	95% non-condensing					
PHYSICAL						
Weight	200 g					
WARRANTY						
1 YEAR						
ORDERING INFORMATION						
HYC-N300cST-33	Outdoor 600 ~ 620 MHz 2W SISO HT-OFDM PTP/PTMP (CSMA/TDMA) Radio					
HYC-N300ccST-33	Outdoor Dual 600 ~ 620 MHz 2W SISO HT-OFDM PTP/PTMP (CSMA/TDMA) Radio					
HYC-N300cSCP-33	Outdoor 600 ~ 620 MHz 2W SISO HT-OFDM CPE					
HYC-N302cSCR-33gn	Outdoor 600 ~ 620 MHz 2W SISO HT-OFDM CPE Router with 802.11gn WiFi AP					
HYC-OLTR-201cSB-33	Outdoor 4G/LTE backhaul (Redundancy) & 600 ~ 620 MHz 2W SISO HT-OFDM PTP/PTMP (CSMA/TDMA) Radio					
HYC-LTR-201cSCP-33	Indoor 600 ~ 620 MHz 2W SISO HT-OFDM 2Watts CPE, SMA-Male connector					
HYC-LTR-201cSCR-33	Indoor 600 ~ 620 MHz 2W SISO HT-OFDM 2Watts CPE Router, SMA-Male connector					
HYC-LTR-2012cSCR-33gn	Indoor 600 ~ 620 MHz 2W SISO HT-OFDM 2Watts CPE Router with 802.11gn WiFi AP, SMA-Male connector					