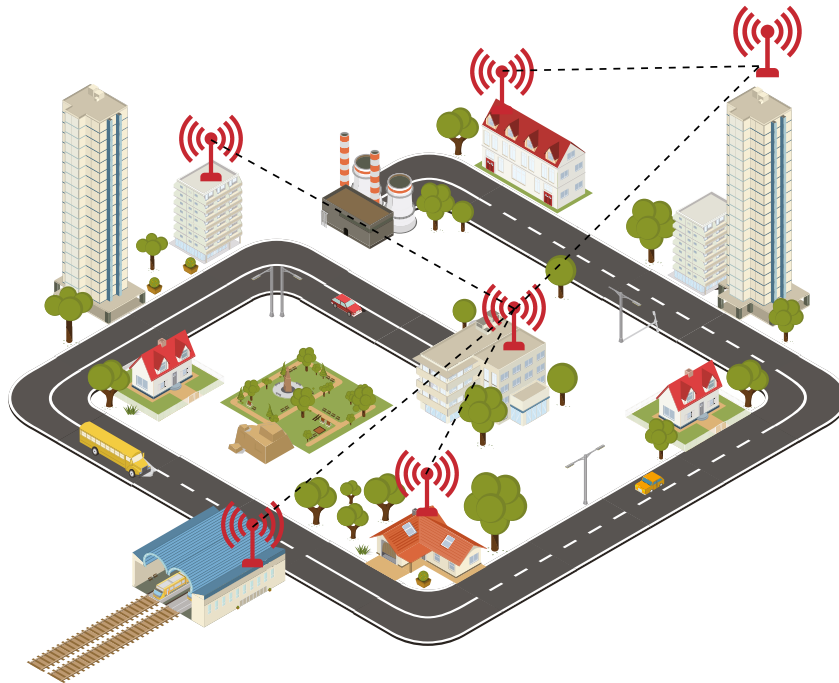




# EC SYSTEM

## EC-Link

3.1 – 4.0 GHz  
Frequency Bands



**EC LINK** is a Professional wireless Point-to-Point solution, which combines high-speed capability, up to 300 Mbps throughput and can achieve distances in excess of 80 Km. All models use MIMO technology to improve the communication performance. The units have incorporated L2/L3 routers and are fully compatible with our EC System multipoint solutions.

**EC LINK** is the choice of excellence to connect remote corporate sites to the headquarters, thus allowing the simultaneous transmission of multi-protocol services such as voice, video and data. The EC-link is an integral part of our EC System family of solutions. EC-link supports GPS synchronization and can also be deployed by mobile operators requiring multi-megabit capacity for their backhaul links.

**EC LINK** is a unique solution for operators to deliver Fast Ethernet data, voice and video services over long distances providing a wide range of networking features and maintaining strict QoS control. The EC-link range of solutions comprises of a number of high performance Fixed Broadband Wireless Access (FBWA) units, which operate in both LOS (line-of-sight) and NLOS (non-line-of-sight) environments, in both licensed and unlicensed frequency bands.

## Applications

- ✓ GSM/3G/LTE High-capacity backhaul
- ✓ WISP infrastructure backhaul
- ✓ Building-to-building connectivity at Fast Ethernet speeds
- ✓ Cost-effective alternatives to legacy microwave links or wired leased lines
- ✓ NLOS backhauling using lower frequency bands
- ✓ Reliable backup for fibre lines, high-speed FSO or millimetre-wave links





## Key Features

- ✓ Available in 3.1 to 4.0 GHz frequency bands Wide range of
- ✓ Terminals with license upgrade option
- ✓ High capacity – up to 280 Mbps net throughput
- ✓ 3.5/5/7/10/14/15/20/28/30/40 MHz channel widths
- ✓ Possible operational distances in excess of 80 km
- ✓ LOS (line-of-sight) and NLOS (non-line-of-sight) deployments
- ✓ Advanced Quality-of-Service Support
- ✓ Gigabit Ethernet port
- ✓ Flexible uplink/downlink reallocation

## Features

### RADIO

- ✓ Voice/RTP Aware Superpacketting
- ✓ Automatic Bitrate Control
- ✓ Automatic Transmit Power Control
- ✓ Automatic Distance Learning
  
- ✓ Channel Time Adjustment
- ✓ Spectrum Analyzer mode
- ✓ Channel testing tools

### ENVIRONMENTAL

- ✓ **Outdoor Units:** -40..+60°C,  
100% humidity, condensing
- ✓ **Indoor Unit:** 0..+40°C,  
95% humidity, non-condensing

### MAC

- ✓ Dynamic adaptive Polling
- ✓ Pseudo-radio Interface
  - unique Eurolink Wireless feature to join Eurolink Wireless networks via 3rd party equipment
- ✓ (Wired Ethernet segments, IP clouds) Automatic over-the-air firmware upgrade

### QUALITY-OF-SERVICE

- ✓ 16 priority queues IEEE
- ✓ 802.1p support
- ✓ IP TOS / DiffServ support
- ✓ Full voice support
  - Traffic limiting (absolute, relative, mixed)
- ✓ Traffic redirection

### STANDARD COMPLIANCE

- ✓ **Radio**
  - ETSI EN 301 893 v.1.7.1
  - ETSI EN 302 502 v.1.2.1
  - FCC Part 15.247
- ✓ **EMC**
  - ETSI EN 301 489-1
  - ETSI EN 301 489-17
  - FCC Part 15 Class B
- ✓ **Safety**
  - ETSI EN 60 950-1:2006
- ✓ **RoHS**
  - Directive 2002/95/EC

### SECURITY FEATURES

- ✓ Storm / flood protection
- ✓ Password protection
- ✓ Secure command-line access via SSH protocol

## RECOMMENDED APPLICATIONS

- ✓ GSM/3G/LTE high-capacity backhaul
- ✓ WISP infrastructure backhaul
- ✓ WISP Internet POP for remote areas
- ✓ LAN-to-LAN connectivity at Fast Ethernet speeds
- ✓ Ultra-high spectral efficiency backhaul
- ✓ A cost-effective alternative for legacy microwave links
- ✓ Reliable backup for fiber lines, high-speed FSO or millimeter-wave links
- ✓ High-capacity CCTV backhaul
- ✓ A cost-effective alternative for legacy microwave links
- ✓ Lightweight high spectral efficiency backhaul
- ✓ Redundant Cellular backhaul, Ethernet/IP transport

	Product family			
Model	H3-A	H3-C	S3-A	S3-C
Antenna	<ul style="list-style-type: none"> <li>22 dBi dual-pol integrated antenna</li> </ul>	<ul style="list-style-type: none"> <li>2 x N-type (Female) connectors for external antenna</li> </ul>	<ul style="list-style-type: none"> <li>Integrated 19 or 22 dBi Dual-polarization Antenna</li> </ul>	<ul style="list-style-type: none"> <li>2 x N-type (Female) connectors for external antenna</li> </ul>
Performance	<ul style="list-style-type: none"> <li>300 Mbps (Up to 280 Mbps net throughput)</li> </ul>		<ul style="list-style-type: none"> <li>8 Mbps (up to 8 Mbps net)</li> <li>50 Mbps (up to 50 Mbps net)</li> <li>300 Mbps (up to 180 Mbps net)</li> <li>License upgradeable</li> </ul>	
Distance	<ul style="list-style-type: none"> <li>Middle-to-long range (30+ km)</li> </ul>	<ul style="list-style-type: none"> <li>Long range (80+ km with high-gain external antenna)</li> </ul>	<ul style="list-style-type: none"> <li>19 dBi antenna: short-to-middle range (up to 5-10 km)</li> <li>22 dBi antenna: middle range (7-12 km)</li> </ul>	<ul style="list-style-type: none"> <li>Long range (up to 60 km with high-gain external antenna)</li> </ul>
Radio	<ul style="list-style-type: none"> <li>Radio technology: MIMO 2x2 with OFDM 64/128</li> <li>Modulation types: BPSK 1/2 to QAM64 5/6</li> <li>Transmit power: up to 23 dBm</li> <li>Receiver sensitivity: -67..-97 dBm</li> <li>Frequency bands:                             <ul style="list-style-type: none"> <li>3.1-3.4 GHz</li> <li>3.4-3.7 GHz</li> <li>3.7-3.9 GHz</li> <li>3.9-4.0 GHz</li> </ul> </li> <li>Channel bandwidth: 3.5/5/7/10/14/15/20/28/30/40 MHz</li> <li>Center frequency adjustment step: 125 kHz</li> <li>Channel duplex: TDD</li> </ul>			
Wired interfaces	<ul style="list-style-type: none"> <li>Gigabit Ethernet port (10/100/1000 Base-T) RJ-45 connector</li> <li>Serial port (RS-232)</li> </ul>		<ul style="list-style-type: none"> <li>2x Fast Ethernet (10/100 Base-T) PoE output at the second Ethernet port RJ-45 connector</li> </ul>	
Power consumption	<ul style="list-style-type: none"> <li>Consumption: Up to 12 Watts</li> <li>Power options: 110-240 VAC @ 50/60 Hz ±43..56 VDC IEEE 802.3 at</li> </ul>		<ul style="list-style-type: none"> <li>Consumption: Up to 7 Watts</li> <li>Power options: 110-240 VAC @ 50/60 Hz +9..56 VDC</li> </ul>	