



**ES5723 — PTP Kit Integrated with 23 dBi antenna**



**ES5729 — Connectorized PTP Kit Bundled with 30dBi antenna and radome. kit shown here.**

### Applications

- Carrier / ISP Backhaul
- Video Surveillance Transport
- Lease Line Replacement
- Industrial Connectivity
- Metro / Core Backbone

### Future Software Upgrade

- GPS Synchronization — minimize colocation RF interference in dense radio deployments
- Distance optimizer — minimize the throughput loss at long distances by removing packet acknowledgement and inter-frame gaps.

### Feature Summary

- 700Mbps L2 data throughput
- 5.15 – 5.85 GHz unlicensed bands
- High radio output power – 26 dBm @ 256QAM
- 802.3af POE Power to 2nd Ethernet port to power up camera
- Adaptive Coding and Modulation (ACM)
- Adaptive Transmit Power Control (ATPC)
- GPS location of the radio, displayable on GUI or Solectek EMS
- Heat management for long-term reliability
- GUI access via 2.4GHz WiFi without Ethernet connection
- Virtual Channel for remote unit monitoring and diagnostics
- Built-in Spectrum Analyzer and Audio Tone Antenna Alignment Tool
- GPS Synchronization for co-location (future software upgrade)
- Long distance optimizer – minimize throughput loss (future upgrade)

### Product Description

The SkyWay-Essence-700 PTP kit, Solectek's fifth-generation OFDM product line in the 5GHz frequency band, answers the need for ever increasing data capacity demands for today's large bandwidth multimedia applications.

With the L2 throughput up to 700 Mbps, the Essence 700 PTP kits can serve a wide variety of bandwidth hungry applications, from transporting video traffic from a network of network video cameras to supporting enterprise connectivity.

The improved RF link performance stems from high power radio with industry-leading Tx power up to 26 dBm at 256QAM. Adaptive transmit power control (ATPC) will automatically adjust Tx power to the optimum setting so that the receiver will maintain a constant signal level. This protects the remote radio receiver and facilitates multiple-radio co-location. For long-term reliable operation, excess heat from the high-power radio is directly dissipated using the enclosure surface.

The 48VDC input power is cascaded to the 2nd Ethernet port, which can power up any 802.3af compliant devices such as IP cameras and sensors. Via a built-in 2.4Ghz WiFi module, Essence radio's mobile-friendly user interface can be accessed by using a smartphone or tablet, without Ethernet cable connection.

A built-in GPS module gives the real-time, precise location of the unit, which can be displayed on a map. All GPS-equipped Solectek radios can be displayed in a single network map on Solectek EMS console.

A virtual management channel provides for display of remote unit statistics for effective monitoring and management of the whole link from one side.

System	ES 5723	ES 5729
Operating Mode	TDD / Half-Duplex	
Throughput	700 Mbps, L2	
Link Range (1)	Up to 20 Miles	Up to 40 Miles
<b>Radio</b>		
Frequency	5.15 – 5.85 GHz (2)	
RF Power	400mW (26dBm) @ 256QAM to BPSK Adaptive Transmit Power Control (ATPC) Heat management for long-term reliability	
RF Channel Size	20, 40, 80 MHz	
MIMO	2 x 2, 2 streams	
Modulation	OFDM – 256QAM 64QAM, 32QAM, 16QAM, QPSK, BPSK	
Modulation Modes	Fixed or Adaptive Coding & Modulation (ACM)	
FEC	1/2, 2/3, 3/4	
Antenna	Integrated, 23dBi	Bundled, 29 dBi
<b>Networking</b>		
Ethernet	Up to (2) Gigabit Ethernet Ports 802.3af POE power on 2nd Ethernet port (2nd Eth port and POE pass through are optional features)	
	Auto-negotiation, Full/Half Duplex, Max 100m between radio and switch	
QoS	<ul style="list-style-type: none"> <li>Proprietary frame aggregation</li> <li>Line speed packet inspection of 802.1p tags</li> <li>4 queue prioritization engine</li> </ul>	
Protocol Support	<ul style="list-style-type: none"> <li>Transparent MAC layer bridging</li> <li>Transparent VLAN (802.1q)</li> </ul>	
Management	<ul style="list-style-type: none"> <li>HTTP web server &amp; Telnet</li> <li>SNMP v1, v2c with private MIB</li> <li>NTP for server-based time support</li> <li>Filterable event log</li> </ul>	
Security	<ul style="list-style-type: none"> <li>Line speed 128bit AES encryption</li> <li>802.1x/RADIUS authentication</li> <li>MAC-based network access control</li> </ul>	

<b>Electrical</b>		
Voltage	48V DC, nominal	
Dissipation	15W (typical)	
POE	Integrated POE/Power Supply	
<b>AC/DC Power</b>		
Voltage	100-240 VAC / 50-60 Hz	
Efficiency	> 85%	
AC Cord	3 prong, IEC 320 C13, country specific	
Mechanical	ES 5723	ES 5729
Dimensions	15" x 15" x 4" in (Radio + Ant)	9" x 9" x 4" in (Radio) 26" x 26" x 13" in (Antenna)
Weight	6.5 lb (3 kg)	5 lb (2.5 kg) 18 lb (8 kg)
Material	A380 Aluminum / ABS Plastic	
Finish	Powdercoat, Pantone 1C DuPont	
Network Ports	RJ45 via environmental seal, included	
Antenna Ports	None	2 N-type Connectors
<b>Mounting Kits</b>		
Dimensions	6.5" x 3.0" in	
Deg. Freedom	3 deg (elevation, azimuth, rotation)	
Adjust Range	Elevation: +/- 75 degrees Azimuth: +/- 90 degrees Polarization: 360 degrees	
Mast Mount	Mast Diameter: 0.75 to 3 inches	
Wall Mount	4 x clamps through holes	
<b>Environmental</b>		
Temperature	- 40 to 65 C	
Humidity	5-95%, condensing	
Protection	NEMA4 / IP67	
<b>Regulatory</b>		
FCC / IC	CFR47, Part 15, RSS-120	
EU	CE Mark	

Notes: 1. RF condition and configuration dependent.  
2. Country specific, depends on local regulations.