

Cisco PS5171 QPSK Receiver/Demodulator and Cisco PS5180 CA Descrambler/Multiplexer

Cisco Video Networking Systems are the ultimate solution for customers who need to distribute reliable, high-quality video services over a digital broadband network.

The Cisco PS5171 QPSK Receiver/Demodulator and Cisco PS5180 CA Descrambler/Multiplexer are part of the Cisco VN 5900 and VN 5902 Video Networking Systems—high-performance video head-end solutions that receive audio and video streams from any satellite, terrestrial, or wireless source. The Cisco VN 5900 and VN 5902 Video Networking Systems perform a wide range of video processing and adapt the streams to any standards-based digital broadband network.

The Cisco PS5171 QPSK Receiver/Demodulator complements a complete TV content redistribution solution, by receiving and demodulating audio and video streams from satellites or terrestrial-based wireless networks. The Cisco PS5180 CA Descrambler/Multiplexer descrambles any or all of the video signals from a single MPEG-2 Multiprogram Transport Stream (MPTS).

The Cisco PS5171 QPSK Receiver/Demodulator supports Binary Phase Shift Keying (BPSK), Offset Quadrature Phase Shift Keying (OQPSK), and Quadrature Phase Shift Keying (QPSK) modulation schemes, and accepts L-band signals at data rates up to 57 Mbps. After demodulating the audio and video streams, the Cisco PS5171 QPSK Receiver/Demodulator sends the signals in Digital Video Broadcast/Access Server Integration (DVB/ASI) format to the system's descramblers or to MPEG-2 multiplexers for further processing. Alternatively, it outputs the signals through BNC connectors.

Table 1 is a summary of the Cisco PS5171 QPSK Receiver/Demodulator features and benefits.

The Cisco PS5180 CA Descrambler/Multiplexer receives transport streams from the Cisco PS5171 QPSK Receiver/Demodulator or from any Asynchronous Transfer Mode (ATM), IP, or IP over ATM network. The descrambled output streams are channeled to an input/output (I/O) or to one of the system's network adaptation interfaces. The Cisco PS5180 CA Descrambler/Multiplexer can also demultiplex the descrambled stream into multiple Single-program Transport Streams (SPTS), for direct adaptation to ATM, IP, or IP over ATM networks. The Cisco PS5180 CA Descrambler/Multiplexer accepts up to six Conditional Access (CA) Digital Video Broadcasting Common Interface (DVB/CI) Personal Computer Memory Card International Association (PCMCIA) descrambler modules supplied by a TV content provider. The Cisco PS5180 CA Descrambler/Multiplexer supports all major digital television scrambling systems.

Table 2 is a summary of the Cisco PS5180 CA Descrambler/Multiplexer features and benefits.



Table 1 Cisco PS5171 QPSK Receiver/Demodulator Feature and Benefit Summary

Feature	Benefit
DVB-S-compliant QPSK L-band receiver	Widely accepted DVB-compliant satellite system
Reed-Solomon and Viterbi decoder support	Forward error correction (FEC) decoding and bit stream error correction

Table 2 Cisco PS5180 CA Descrambler/Multiplexer Feature and Benefit Summary

Feature	Benefit
Wide range of CA system support	Single-module support for multiple CA systems in simulcrypt and multicrypt modes
ATM, IP, and IP over ATM support	Adaptation of MPEG-2 streams onto standards-based digital broadband networks

Figure 1 Cisco PS5171 QPSK Receiver/Demodulator



Figure 2 Cisco PS5180 CA Descrambler/Multiplexer



Cisco PS5171 QPSK Receiver/Demodulator Specifications

Input

- RF input frequency of 950-2050 MHz (L-band)
- Input variable rate of up to 57 Mbps

Output

- DVB/ASI output of demodulated QPSK signal
- DVB/ASI output from descramblers or multiplexers

Input/Output Connectors

- F-type 75-Ohm input connector
- BNC output connector for demodulated signal
- BNC output connector for DVB/ASI stream

Modulation Support

- BPSK
- OQPSK
- QPSK

Decoding Support

- 64-state Viterbi decoder supports rates 5/11, 1/2, 3/5, 2/3, 3/4, 4/5, 6/7, 7/8
- Reed-Solomon decoder with programmable coding schemes (204, 188) and (146, 130)

Standards

- ETSI 300 421: framing structure, channel coding and modulation for 11/12-GHz satellite services (DVB-S)
- ETSI 300 784: television receive-only (TVRO) satellite earth stations operating in the 11/12-GHz frequency bands
- IEC 1319-1: interconnections of satellite receiving equipment—Part I: Europe

Cisco PS5180 CA Descrambler/Multiplexer Specifications

Common Interface Compliance

- DVB/CI (CENELEC EN-50221)
- NRSS-B (SCTE IS-679 Part B)
- DAVIC v1.2 (CA0 interface)

Conditional Access Systems Supported

- (Conditional Access cards are not included, and must be obtained separately from a TV content provider)
- NagraVision
- Philips CryptoWorks
- Telenor Conax CAS3

Network Adaptation Interfaces

- ATM
- IP
- IP over ATM

Standards

- ETSI TS 101 197-1
- ETSI TR 289



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