Specifications

DRS4 10G sample/s Spectrometer

Item	Specifications
Maximum analog input	2ch
Analog input bandwidth	0.1~5GHz
ADC sampling frequency	9.8304GHz
ADC quantization bits	12bit
FFT pre-processing	Window function (Blackman / Hanning / Hamming / None) Selectable by control command
FFT size	131,072
FFT frequency resolution	75KHz
Integration time	10ms/100ms/1s Selectable by control command
Output data	Power spectrum
Output format	Single-precision floating-point format (32bit)
Output protocol	VTP/VDIF/UDP/IP or custom protocol To be specified upon ordering
Output interface	Ethernet 1Gbit
Control protocol	Attached Python script
Control interface	Ethernet 1Gbit
Reference clock	10MHz Input BNC-jack
Reference timing	1PPS Input BNC-jack
Power input voltage	AC100-240V
Size	EIA 1U
Weight	11Kg

DRS4 64G sample/s Spectrometer

Item	Specifications
Maximum analog input	2ch
Analog input bandwidth	0.1~32GHz
ADC sampling frequency	64GHz
ADC quantization bits	10bit
FFT pre-processing	Window function or Polyphase filter bank ※To be specified upon ordering
FFT size	■Window function : 8192 ■Polyphase filter bank : 4096
FFT frequency resolution	■Window function : 7.8125 MHz ■Polyphase filter bank : 15.625MHz
Integration time	10ms/100ms/1s ※Selectable by control command
Output data	Power spectrum
Output format	Single-precision floating-point format (32bit)
Output protocol	VTP/VDIF/UDP/IP or custom protocol ※To be specified upon ordering
Output interface	Ethernet 1Gbit
Control protocol	Attached Python script
Control interface	Ethernet 1Gbit
Reference clock	10MHz Input BNC-jack
Reference timing	1PPS Input BNC-jack
Power input voltage	AC100-240V
Size	EIA 3U
Weight	T.B.D. 15Kg

elecs

Elecs Industry Co.,Ltd.
1-22-23, Shinsaku, Takatsu-ku, Kawasaki-shi, Kanagawa, Japan
[Contact] HARADA Ken-ichi
　　　　harada <at> elecs.co.jp
　　　　※Please convert <at> to @

Notes

The products and services described in this document may be discontinued or specifications may be changed without prior notice.

https://elecs.co.jp/en/

DRS4 10G sample/s Spectrometer
DRS4 64G sample/s Spectrometer Sale in 2026

Direct RF Sampler with Digital Signal Processing 4th generation
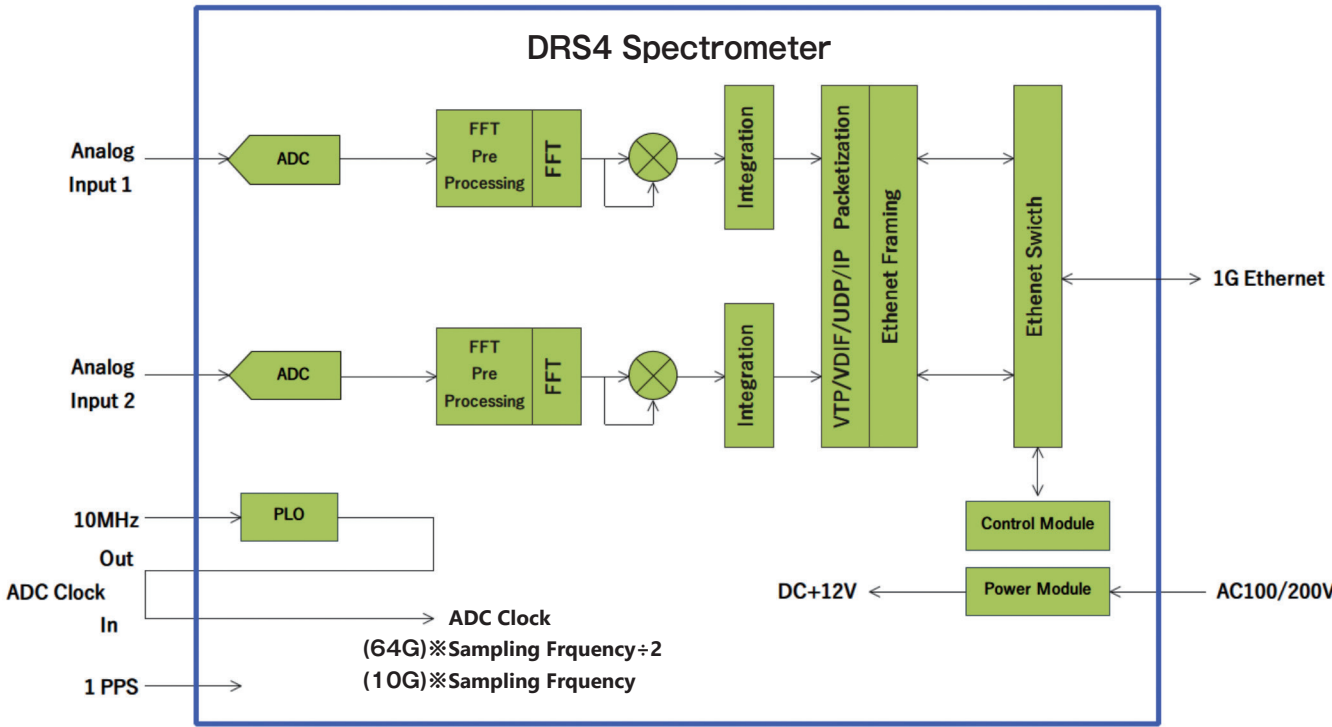

Features

DRS4 10G sample/s Spectrometer

- ●AD converter : 10G sample/s x 12bit
- ●AD converter analog bandwidth : 0.1~5GHz
- ●Size : EIA 1U

DRS4 64G sample/s Spectrometer

- ●AD converter : 64G sample/s 10bit
- ●AD converter analog bandwidth : 0.1~32GHz
- ●Size : EIA 3U

Block Diagram

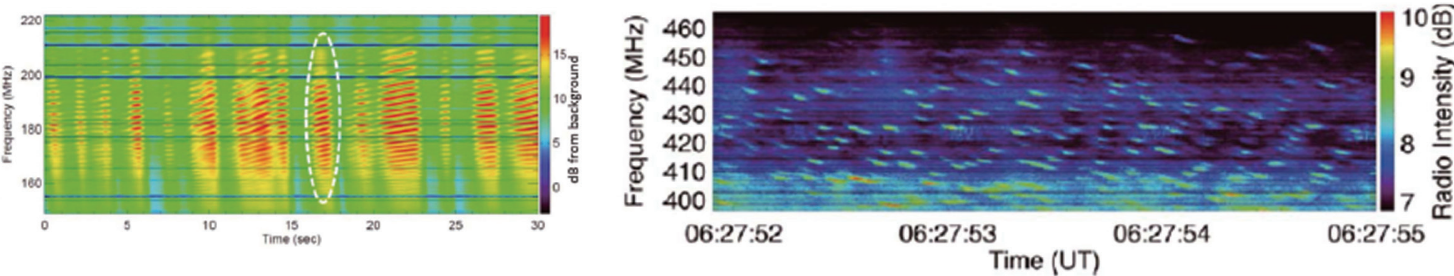DRS4 Spectrometer

DRS4 10G sample/s Spectrometer

Case Study : Tohoku University
Wide band spectro-polarimeter for solar radio burst observations

The Planetary Plasma & Atmospheric Research Center (PPARC) at Tohoku University operates a large-aperture radio telescope called the Iitate Planetary Radio Telescope (IPRT). One of the radio receivers installed on the IPRT is the AMARERS, which is a wideband metric radio spectro-polarimeter for observing solar radio bursts with fine time and spectral resolutions (the total bandwidth is 1.5GHz, combining right-hand and left-hand polarizations with a time resolution of 10ms and spectral resolution of <100kHz).

URL: https://pparc.gp.tohoku.ac.jp/research/iprt/

Iitate Planetary Radio Telescope (IPRT)

Fine spectral structure in Solar Type-IV radio bursts.
Left: [Kaneda et al., 2015].
Right: [Katoh et al., 2014].

DRS4 10G sample/s Spectrometer

Case Study :NICT
Solar Observation for Space Weather Forecasting

The Solar Radio Monitoring System was established at NICT's Yamagawa Radio Observation Facility in Ibusuki, Kagoshima Prefecture, and has been conducting routine observations since October 2016.
The observation frequency range is 70 MHz to 9 GHz, which nearly covers the entire spectrum where solar radio bursts originating from flares are detected.
In this Solar Radio Monitoring System, our company's products are adopted for the Spectrometer—which performs A/D conversion and frequency analysis for the 70 MHz to 9 GHz range—and the NAS (Network Attached Storage) used for archiving of the observation data.
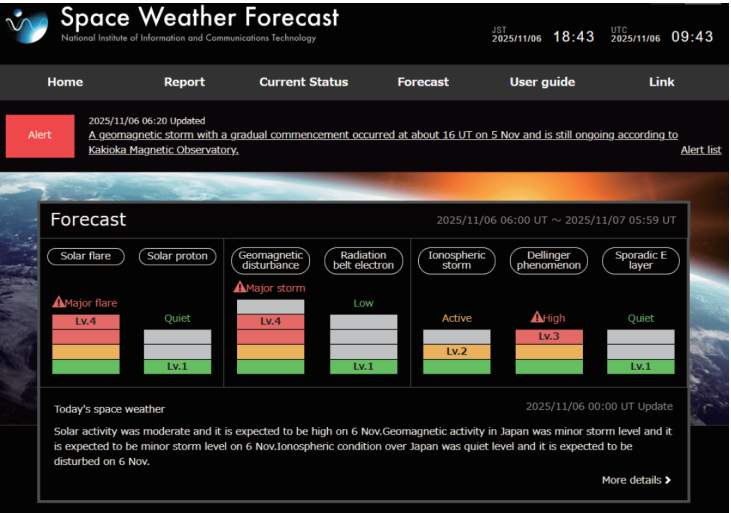
Real-time dynamic spectrum of YAMAGAWA solar radio spectrograph
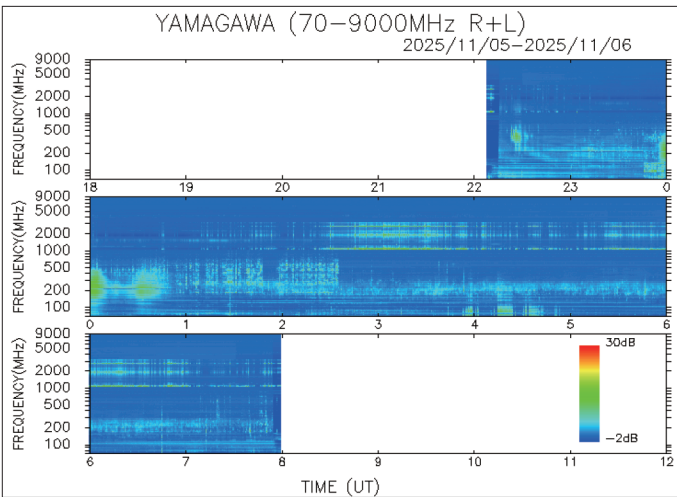
The plot updates every 1 minute with a delay of a few tens of second.

Solar Radio Observation System
at NICT's Yamagawa Radio Observation Facility
※NICT(National Institute of Information and Communications Technology)

NICT's Space Weather Forecast Website
https://swc.nict.go.jp/en/