**File Header**

80 bytes

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of block** | **Field** | **Format** | **Note** |
| **File Format Header**  24 bytes | FileName | *String* com 15 caracteres (um byte por caractere) | “RFlookBin v.1/1”  Format: RF Look Bin  Version: 1  DataType: 1 |
| BitsPerPoint | uint8 | 8 (uint8) | 16 (uint16) | 32 (float32/single)  uint8(2.\*specData + value)  value = -2\*RefLevel+255  int16(100.\*specData)  single(specData) |
| EstimatedSamples | uint32 |  |
| WritedSamples | uint32 |  |
| **Spectrum analyzer MetaData**  26 bytes | F0 | single (float32) |  |
| F1 | single (float32) |  |
| Resolution | single (float32) |  |
| DataPoints | uint16 |  |
| TraceMode | int8 | 1 (ClearWrite) | 2 (Average) | 3 (MaxHold) | 4 (MinHold) |
| Detector | int8 | 1 (Sample) | 2 (Average) | 3 (RMS) | 4 (PositivePeak) | 5 (NegativePeak) |
| LevelUnit | int8 | 1 (dBm) |
| Preamp | int8 | 0 (Off) | 1 (On) |
| AttenuationMode | int8 | 0 (Manual) | 1 (Automatic) |
| AttenuationFactor | int8 | Se attMode = 1, attFactor = 0; |
| SampleTime | single (float32) |  |
| Alignment 64-bits | 2 bytes |  |
| **GPS Data**  18 bytes | gpsType | uint8 | 0 (manual) | >= 1 (auto)   * 1 (built-in gps) * 2 (external gps) |
| gpsStatus | uint8 | -1 (manual) | 0 (invalid) | >= 1 (valid) |
| Latitude | single (float32) | IF gpsStatus <= 0: Latitude = -1 |
| Longitude | single (float32) | IF gpsStatus <= 0: Longitude = -1 |
| utcTimeStamp\_YY | int8 (-2020) | IF gpsType = 0 || gpsStatus == 0:  utcTimeStamp\_YY = -1  utcTimeStamp\_MM = -1  utcTimeStamp\_DD = -1  utcTimeStamp\_HH = -1  utcTimeStamp\_mm = -1  utcTimeStamp\_ss = -1  utcTimeStamp\_SSS = -1 |
| utcTimeStamp\_MM | int8 |
| utcTimeStamp\_DD | int8 |
| utcTimeStamp\_HH | int8 |
| utcTimeStamp\_mm | int8 |
| utcTimeStamp\_ss | int8 |
| utcTimeStamp\_SSS | int16 (\*1000) |
| **Offset Info**  12 bytes | Offset1 | Uint32 | Start byte of GPS/TimeStamp Block |
| Offset2 | Uint32 | Start byte of Spectral Block |
| Offset3 | Uint32 | Start byte of Text Trailer Block |

**Spectral Block**

(BitsPerPoint/8 \* DataPoints \* EstimatedSamples) bytes

|  |  |
| --- | --- |
| **Field** | **Format** |
| Array of Levels | Vetor com comprimento igual a DataPoints, sendo cada número representado como uint8, uint16 ou float32. |

**Text Trailer Block**

{TaskName: “PMEC 2021”; ThreadID: “1”; Description: “Uma faixa qualquer”; Node: “R&S/FSL-6/01”; Antenna: “CRFS Low Band”; AntennaHeight: “2 m”; RevisitTime: “1 seg”}

|  |  |
| --- | --- |
| **Optional fields** | **Format** |
| AntennaAzimuth  AntennaElevation | Field\_N: “Value\_N” |
| Selectivity |
| IntegrationTime |
| Threshold |

**Gps/TimeStamp Data**

(20\*EstimatedSamples) bytes

|  |  |
| --- | --- |
| **Field** | **Format** |
| localTimeStamp\_YY | int8 (-2020) |
| localTimeStamp\_MM | int8 |
| localTimeStamp\_DD | int8 |
| localTimeStamp\_HH | int8 |
| localTimeStamp\_mm | int8 |
| localTimeStamp\_ss | int8 |
| localTimeStamp\_SSS | int16 (\*1000) |
| RefLevel | Int16 |
| AttenuationFactor | uint8 |
| gpsStatus | uint8 |
| Latitude | single (float32) |
| Longitude | single (float32) |