Inclusion of the **X and Y** channels is **mandatory**. Either the T channel or the DT channel must be present, or uniform sampling (constant time difference between adjacent sample points) must be indicated. Inclusion of the other channels is optional.

Channel name	Interpretation
X	x coordinate (horizontal pen position)
Y	y coordinate (vertical pen position)
Z	z coordinate (height of pen above the writing plane)
VX	velocity in x direction
VY	velocity in y direction
AX	acceleration in x direction
AY	acceleration in y direction
T	time
DT	time difference
F	pen tip force (pressure)
S	tip switch state (touching/not touching the writing plane)
TX	tilt along the x axis
TY	tilt along the y axis
Az	azimuth angle of the pen (yaw)
El	elevation angle of the pen (pitch)
R	rotation (rotation about the pen axis)

Pen position channels: X, Y
The unit of measurement is metres (m). To restore the actual values, the integer values given in the BDB body are to be divided by a scaling value given in the BDB header. By choosing appropriate scaling values, different resolutions can be expressed for several applications.

Pen velocity channels: VX, VY
The unit of measurement is metres per second (m/s). To restore the actual values, the integer values given in the BDB body are to be divided by a scaling value given in the BDB header. By choosing appropriate scaling values, different resolutions can be expressed for several applications.

Pen acceleration channels: AX, AY
The unit of measurement is metres per square second (m/s^2). To restore the actual values, the integer values given in the BDB body are to be divided by a scaling value given in the BDB header. By choosing appropriate scaling values, different resolutions can be expressed for several applications.

Time channel: T
The T channel is defined for recording time data relative to the first sample.
The unit of measurement is seconds (s). To restore the actual values, the integer values given in the BDB body are to be divided by a scaling value given in the BDB header. By choosing appropriate scaling values, different resolutions can be expressed for several applications.

Time difference channel: DT
The DT channel is defined for recording time data relative to the previous sample.
The unit of measurement is seconds (s). To restore the actual values, the integer values given in the BDB body are to be divided by a scaling value given in the BDB header. By choosing appropriate scaling values, different resolutions can be expressed for several applications.

Pen tip force channel: F
The F channel is defined for recording pen forces (pressure) data.
The unit of measurement is Newton (N). To restore the actual values, the integer values given in the BDB body are to be divided by a scaling value given in the BDB header. By choosing appropriate scaling values, different resolutions can be expressed for several applications.

Tip switch state channel: S
The S channel is defined for recording whether the pen touches the writing plane or not. The data values shall be 0 in case of non-touching and 1 in case of touching.

Minimum X (& Y) resolution and variation

The minimum value should be 40 dots per centimetre. The resolution should not vary by more than 5% from the mean value across any chosen horizontal centimetre. The X resolution should not depend on velocity and pen tilt up to a predefined maximum velocity and tilt.

Minimum sample frequency and variation

The minimum value should be 50 samples per second. There should be no sequential sample points with F > 0 separated by more than 20 milliseconds.

X (& Y) jitter

For any chosen point, the X jitter should be less than 0,2% of the range of possible X values.

Force

Inclusion of the F channel is recommended.
Where force measurements are returned the values should be within 10% of the equivalent millinewtons determined at calibration.